First Alert PROFESSIONAL SECURITY SYSTEMS®

FA6150RF-GP
Keypad/Transceiver

INSTALLATION INSTRUCTIONS

About the FA6150RF-GP

The Guardian Protection Services FA6150RF-GP keypad/transceiver is a combination unit that contains:

- A 6150 Fixed Addressable Keypad
- A 5881M RF Receiver
- A 5800TM Transmitter Module
- A normally-open relay output.

The FA6150RF-GP Keypad/Transceiver may be used on any control panel that supports the FA260KP Keypad (e.g., FA142C, FA162C, FA1220C, FA1340C, FA110C, FA120C, FA1200C).

Features of the FA6150RF-GP

Wireless Features

- Supports up to 8 wireless keys locally (programmed directly into FA6150RF-GP) without occupying any zones supported by the control panel.
- Supports button-type transmitters (5804, 5804BD) for local operation.
- Supports a maximum of 16 transmitters programmed into any 5800 Series-supported control panel.
- Provides low-battery indications for the local wireless keys.
- Supports wireless keys with Signal Sentry (high-security) (5804E).
- Provides a nominal range of 200' for the RF transmitters (some transmitters have a shorter range).
- Supports RF jam detection when the receiver is enabled.
- Provides wireless key support for control panels that do not support RF themselves (such as FA110C).

UL The following transmitters are not intended for use in UL installations: 5804, 5804BD, 5804BDV, 5804E and 5827BD.

Programming Features

- Provides an Auto Enroll mode for programming of the wireless keys.
- Provides a method for deleting a serial number and re-enrolling a new one in its place.
- Provides default settings for the functions of the wireless keys.

Additional Features

- Can send status signals (Armed, Ready, etc.) to bi-directional units such as 5804BD, 5804BDV and 5827BD.
- Can operate the on-board relay in conjunction with the receiver (e.g., to trip a garage door opener).
- Can activate relays programmed into the control panel.
- Provides an End User mode to enable/disable local wireless keys (e.g., if a user accidentally loses a wireless key). See the FA6150RF-GP User Guide for this procedure.

Application Guidelines for the FA6150RF-GP

Use the following guidelines when planning an installation:

- Local wireless keys are programmed directly into the FA6150RF-GP and may be used regardless of whether the RF receiver is enabled or disabled.
- If using bi-directional devices, be sure to enable the transmitter module in the FA6150RF-GP.
- If transmitters are programmed into the control panel, be sure to enable the receiver. (Make sure you do not exceed the number of receivers supported by the control panel.)
- If a local wireless key is programmed to arm/disarm or to trigger a relay on the control panel, a user code must be entered into the FA6150RF-GP. This user code must also be programmed into the control panel.
- You must set the House ID only if you are using RF keypads and/or bi-directional devices; **AND** the House ID Source is the FA6150RF-GP (Local).

FA6150RF-GP Application Guide

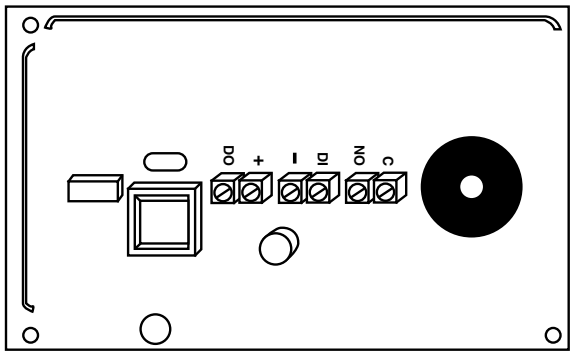
Below is a guide that outlines how to program the wireless keys, RF receiver, and the House ID in the FA6150RF-GP for your particular installation.

Control Panel	Are you using			Program Wireless Keys As	Program RF Receiver	House ID Source*** As
	RF keys beyond system's capacity?	RF receivers beyond system's capacity?	RF keypads and/or Bi-directional devices on more than 1 partition?			
FA110C, FA120C, FA1200C	N/A	N/A	N/A	Local	Disable	Local [0]
FA130C/CP, FA142C, FA148C/CP	NO	NO	N/A	Use Programming Without Local Wireless Keys		
	YES	NO	N/A	Local	Enable [1]	System [1]
	YES	YES	N/A	Local	Disable [0]	Local [0]
FA162C, FA168C/CP, FA168CP-GP	NO	NO	NO	Use Programming Without Local Wireless Keys		
	YES	NO	NO	Local	Enable [1]	System [1]
	YES	YES	NO	Local	Disable [0]	Local [0]
	NO	YES	YES*	System	Disable [0]	Local [0]
	YES	YES	YES*	Local	Disable [0]	Local [0]
FA1220C, FA1340C	NO	NO	NO**	Use Programming Without Local Wireless Keys		
	YES	NO	NO**	Local	Enable [1]	System [1]
	YES	YES	NO**	Local	Disable [0]	Local [0]
	NO	YES	YES	System	Disable [0]	Local [0]
	YES	YES	YES	Local	Disable [0]	Local [0]

* Two FA6150RF-GPs are needed for this application: For FA162C, connect one to partition 1 keypad terminals, and one to partition 2's.
** If using an RF keypad on only one partition, the FA6150RF-GP's partition assignment must match the partition set in field 1*48.
*** If set for Local on a partition control, the FA6150RF-GP's partition assignment must match the one programmed in the BD device.

Installing the FA6150RF-GP

Locate the FA6150RF-GP in an area and at a height where it is convenient for user operation. The FA6150RF-GP must be at least 10' from the control panel to ensure proper operation of the RF receiver.



WIRING TABLE

Keypad	Control Panel	Wire Color
DI	Data In	Green
–	– Aux Pwr (GND)	Black
+	+ Aux Pwr	Red
DO	Data Out	Yellow

Figure 1: FA6150RF-GP Wiring Connections

To install the FA6150RF-GP, refer to *Figure 1* for wiring connections and perform the following steps:

Step	Action
1	Remove the case back by pushing down the two snaps along the FA6150RF-GP's bottom edge and pulling the case apart.
2	Route the wiring from the control panel through the opening in the case back. (See the control panel's instructions for proper wire run lengths.)
3	Mount the case back directly to a wall or electrical gang box.
4	Connect the power and data wires from the control panel to the terminals on the FA6150RF-GP as indicated in the wiring table adjacent to Figure 1 above.
5	Connect the wires for the relay output (if used) to the terminals on the FA6150RF-GP's PC board.
6	Reattach the keypad to its case back.
7	Remove the clear protective films from the LCD display and install the keypad labels, as required.

Note: Upon power-up or exit of the Program Mode, the FA6150RF-GP alternately flashes "Ad" and the 2-digit keypad address and the 2-digit receiver address on the display. Press any key to display the system status.

FA6150RF-GP Programming

The FA6150RF-GP is shipped with pre-programmed default values. Below is a chart showing these values. Later in these instructions are diagrams showing the wireless keys' loops and their default functions. Regardless of which wireless key you use (even if it is one not shown), loops 1-4 are defaulted for all 8 devices as shown. These values may be changed to suit the installation.

Entering Program Mode

Press the [1] and [3] keys simultaneously for a few seconds within 30 seconds after applying power or within 30 seconds after removing the case back. The keypad beeps 3 times, and two dashes and two zeroes flash alternately in the upper left-hand corner of the display. If any other numbers or letters flash in the display, press the [✳] key.

Pressing the [1] and [3] keys **30 seconds or more after** applying power allows you to enter the **User mode**. This mode provides a means to enable and disable individual local wireless keys (useful if, e.g., a user accidentally loses a wireless key). See the User Guide for procedure instructions.

Programming Operations

Once you have entered the Program mode, you may move to any program address simply by entering the program address number. The FA6150RF-GP will automatically exit the Program mode if no keys are pressed for 30 seconds. While in the Program mode:

- Pressing the [✳] key stores the information displayed, then moves you to the next prompt, and the keypad beeps twice.
- Pressing the [**#**] key erases the current information and moves you back so you may enter the correct information.

Enter a program address (e.g., press **[1]** for Keypad Address; **[2]** for Receiver Address) to set the parameters in the FA6150RF-GP. The following chart lists the program addresses, the keypad display, and the choices.

Program Address	Description	Display	Choices	Default
1	Keypad Address	cA	01-31	31
2	Receiver Address	rA	00-30	00
3	House ID	hI	01-31	
4	House ID Source	hS	1 = System 0 = Local	1 System
5	Wireless Key Editing	d-	Enter Existing Device Number	
6	Receiver Enable	r-	1 = On 0 = Off	1 Enable
7	Transmitter Module Enable	tE	1 = On 0 = Off	1 Enable
8	Wireless Key Auto Enroll	d-	Enter Serial Number	
8 then 2	Wireless Key User Code	u4	Enter 4-Digit User Code	
8 then 4	Wireless Key Loop Function	Ln	Enter Loop Number then Function (See *Wireless Key Function Chart*)	Loop 2 1 (Disarm) Loop 3 2 (Arm Away) Loop 4 3 (Arm Stay)
8 then 5	Wireless Key On-Board Relay Assignment	o-	Enter Loop Number then Relay Action	Loop 1 Close for 2 Seconds
9	Restore Defaults	EE	1 = Restores Defaults Any Other Key = Does Not Restore Defaults	
0	*High Security Mode	En	1 = Enable; 0 = Disable	0 Disable

* When operating the system in High-Security mode, non-encrypted wireless keys will still function. If you want only the encrypted wireless keys to operate, be sure to delete all non-encrypted keys from the system.

Defaulting the FA6150RF-GP

To restore the FA6150RF-GP to the default values, perform the following steps:

Step	Action
1	Enter the Program mode by pressing the [1] and [3] keys simultaneously for a few seconds within 30 seconds after applying power. The keypad alternately flashes “00” and two dashes.
2	Press the [9] key. The display flashes “EE.”
3	Press the [1] key to restore the default values, or press any other key to exit without restoring the default values. If you pressed [1], the keypad beeps 3 times and returns to alternately flashing “00” and two dashes. If you pressed any other key, the keypad does not beep, and returns to alternately flashing “00” and two dashes.
4	Press [✳] to exit the FA6150RF-GP Program mode.

Programming Procedure

This section is divided into two parts.

- **Programming for an installation WITHOUT local wireless keys.**
- **Programming for an installation WITH local wireless keys.**
  Using the programming procedure **WITH local wireless keys**, is necessary only if you plan to use wireless keys beyond the control panel’s capacity, or on a system that does not support 5800 Series wireless. Refer to the FA6150RF-GP Application Guide on page 2 for installations that require these settings.
  Note: See the control panel's installation instructions for the acceptable keypad and receiver addresses.

- If you are using a wireless key in High-Security mode (5804E) in the control panel, it will occupy one of the devices in the FA6150RF-GP.
- When operating the system in High-Security mode, non-encrypted wireless keys will still function. If you want only the encrypted keys to operate, be sure to delete all non-encrypted keys from the system.

Programming for an Installation WITHOUT Local Wireless Keys

To program the FA6150RF-GP for an installation without any local wireless keys, perform the following steps:

Step	Action	Display
1	Enter the Program mode by pressing the [1] and [3] keys simultaneously for a few seconds within 30 seconds after applying power or within 30 seconds after removing the case back.	Alternately flashes "oo" and two dashes.
2	Enter [1] (Keypad Address). Enter the 2-digit keypad address (01-31). Press the [✳] key to continue.	Alternately flashes "cA" and the 2-digit keypad address.
3	Enter [2] (Receiver Address). Enter the 2-digit receiver address (00-30). Press the [✳] key to continue.	Alternately flashes “rA” and the 2-digit receiver address.
4	Enter [4] (House ID Source). Enter [1] (System) to use the House ID programmed into the control panel, if RF keypad(s) and/or bi-directional device(s): • Are used on the control panel. OR • Neither is used. Enter [0] (Local) to use the House ID programmed into the FA6150RF-GP (Program Address 3). ***Note:*** *If the House ID Source is:* • ***System (1)****, RF keypad and bi-directional units* ***MUST*** *match the House ID programmed into the control panel.* • ***Local (0)****, RF keypad and bi-directional units* ***MUST*** *match the House ID programmed into the FA6150RF-GP.* Press the [✳] key to continue.	Alternately flashes “hl” and either "1" or "0."

Step	Action	Display
5	Enter [6] (Receiver Enable). Enter [1] to enable, or [0] to disable. Enable the receiver if RF transmitters or wireless keypads are programmed into the control. ***Note:*** *Make sure the number of receivers set for Enable (1) does not exceed the capacity of the control panel.* Press the [✳] key to continue.	Alternately flashes “r-” and either "1" or "0."
6	Enter [7] (Transmitter Module Enable). Enter [1] to enable, or [0] to disable. Enter [1] if bi-directional devices are being used. ***Note:*** *If the House ID Source is System and more than one FA6150RF-GP is used, make sure only one has the Transmitter Module enabled. See Note under* ***House ID Source*** *step 4.* Press the [✳] key.	Alternately flashes “tE” and either "1" or "0."
7	Enter [0] (High-Security Mode). To put the system into High-Security mode, enter [1]. Enter [0] to disable.	En
8	Press the [✳] key to exit the FA6150RF-GP Program mode.	“READY” or “NOT READY”

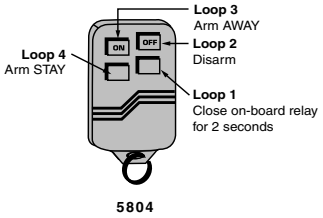
Note: This is all the FA6150RF-GP programming necessary for this application. Upon exiting the Program mode, the FA6150RF-GP alternately flashes "Ad," the 2-digit keypad address, and the 2-digit receiver address. If either of these is incorrect, repeat steps 1 through 3.

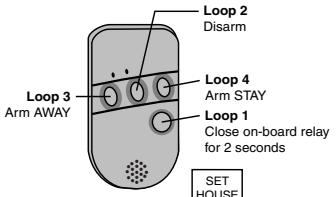
Programming for an Installation WITH Local Wireless Keys

- The FA6150RF-GP is supplied with default settings for the functions of the wireless keys. See page 3.
- If, during the programming of the wireless keys, you make a wrong entry and want to reprogram a wireless key, simply press the [✳] key until “d-“ is displayed. Then enter the correct information.

Perform steps 1-6 in the *Programming for an Installation Without Local Wireless Keys* section. Then perform the following steps:

Step	Action	Display
1	Enter [3] (House ID). Enter the 2-digit House ID for the FA6150RF-GP (01-31). ***Note:*** *The House ID is needed only if RF keypads and/or bi-directional units are used and House ID source is set for Local. The House ID entered here* ***MUST*** *match the House ID programmed in the RF keypad and the bi-directional unit.* Press the [✳] key to continue.	Alternately flashes “hl” and a 2-digit number.
2	Enter [8] (Wireless Key Auto Enroll). The FA6150RF-GP automatically advances to first available device number. ***Note:*** *If all 8 devices have been enrolled, the FA6150RF-GP beeps three times and continues to alternately flash "oo" and "--."*	Alternately flashes "d" with the device number; and “--.”
3	Press any button on the wireless key to enroll the serial number. ***Note:*** *If enrolling a wireless key (5804E) in high-security mode, press all four buttons on the wireless key simultaneously.*	Alternately flashes "d" with the device number and the serial number.
4	Press the [✳] key to accept the serial number; OR press the **[#]** key to reject the serial number. If you accept the serial number, the FA6150RF-GP beeps twice. If you reject the serial number, the FA6150RF-GP returns to the “enroll serial number” prompt. ***Note:*** *A maximum of 8 wireless keys may be enrolled into the FA6150RF-GP. These wireless keys* ***DO NOT*** *occupy any zones supported by the control.* If you are finished programming for now, press **[✳]** to exit. Otherwise, continue with step 5.	If you accept the serial number, the display flashes the device number and a hyphen. If you reject the serial number, the display alternately flashes "d" with the device number; and “--.”
5	Enter [2] (User Code). Enter the 4-digit user code for the wireless key. ***Note:*** *The user code must be a valid code that is programmed in the control panel.* Press the [✳] key to accept the user code. If you are finished programming for now, press **[✳]** to exit. Otherwise, continue with step 6.	Flashes "u4." Once the 4-digit user code is entered, the display flashes "u4," the first two digits, and then the last two digits of the user code.

<table>
<tr><th>Step</th><th>Action</th><th>Display</th></tr>
<tr><td>6</td><td>Enter [4] (Loop Functions). Enter the loop number (1-4).
Note: The FA6150RF-GP is shipped with the loop functions pre-programmed. Perform steps 6 through 10 only if it is necessary to change any of the loop functions.
Loop 1 Close the FA6150RF-GP On-Board Relay for 2 sec.
Loop 2 1 (Disarm)
Loop 3 2 (Arm Away)
Loop 4 3 (Arm Stay)
See the Wireless Key Function Chart below for the choices.
Wireless Key Function Chart
<table>
<tr><th>Function</th><th>Entry</th></tr>
<tr><td>Disarming</td><td>1</td></tr>
<tr><td>Arming Away</td><td>2</td></tr>
<tr><td>Arming Stay</td><td>3</td></tr>
<tr><td>Arming Maximum (Away Instant)</td><td>4</td></tr>
<tr><td>Arming Instant</td><td>7</td></tr>
<tr><td>Panic Alarm
Produces type of alarm [* & #] programmed in control panel.</td><td># + 99</td></tr>
<tr><td>Manually Start a Relay Action</td><td># + 7 (VISTA-10SE, VIA-30PSE)
+ 7 + n (VISTA-20SE(HW))</td></tr>
<tr><td>Manually Stop a Relay Action</td><td># + 8 (VISTA-10SE, VIA-30PSE)
+ 8 + n (VISTA-20SE(HW))</td></tr>
<tr><td>Activate Relay as Programmed in Control</td><td># + 71 (VISTA-40, VISTA-50P)</td></tr>
<tr><td>Activate Relay as Programmed in Control</td><td># + 72 (VISTA-40, VISTA-50P)</td></tr>
<tr><td>Activate Access Control Relay for Partition</td><td>0 (VISTA-40, VISTA-50P)</td></tr>
</table>
n = Device Number programmed in VISTA-20SE(HW) to be controlled
Press the [✳] key.</td><td>Flashes "Ln."
Once the loop number is entered, alternately flashes "L" with the loop number; and the present function.
Default Loop Functions
 

5804
 

5804BD/5804BDV</td></tr>
<tr><td>7</td><td>Repeat step 6 for the rest of the loops of the wireless key.</td><td></td></tr>
<tr><td>8</td><td>To program a button on the wireless key to control the on-board relay, enter [5] (On-Board Relay Assignment).</td><td>Flashes "o-."</td></tr>
<tr><td>9</td><td>Enter the loop number of the wireless key (1-4). Enter the relay action (0 = no action; 1 = relay off; 2 = relay on; 3 = relay toggles on and off; 4 = relay closes for 2 seconds).
Note: The relay action must be "0" for UL installations.
Press the [✳] key.</td><td>Flashing “o” and the loop number.
Once the action is entered, displays “o” and alternately flashes the loop number and the relay action.</td></tr>
<tr><td>10</td><td>Repeat step 9 for the rest of the loops.</td><td></td></tr>
<tr><td>11</td><td>When all loops have been programmed for the wireless key, press the [✳] key.</td><td>Flashes “d” followed by the device number.</td></tr>
<tr><td>12</td><td>The FA6150RF-GP automatically displays the next available device number (one that does not have a serial number).
If you want to program additional wireless keys, repeat steps 3 through 10. Otherwise, press the [#] key. This takes you back to the main display, which alternately flashes “oo” and “- -.”</td><td></td></tr>
<tr><td>13</td><td>Enter [0] (High Security Mode). To put the system into High-Security mode, enter [1]. Enter [0] to disable.</td><td>En</td></tr>
<tr><td>14</td><td>Press [✳] to exit the FA6150RF-GP Program mode.</td><td></td></tr>
</table>

Note: Upon exiting the Program mode, the FA6150RF-GP alternately flashes "Ad," the 2-digit keypad address, and the 2-digit receiver address. If either of these is incorrect, repeat steps 1 through 3 in the *Programming for an Installation Without Local Wireless Keys* section.

Deleting, Replacing, or Editing Wireless Keys

Use the following procedure to delete, replace, or change any of the programming for a wireless key.

Step	Action	Display
1	Enter the Program mode by pressing the [1] and [3] keys simultaneously for a few seconds within 30 seconds after applying power.	Alternately flashes "oo" and two dashes.
2	Enter [5] (Wireless Key Editing). Enter the device number for the wireless key you want to edit. This must be a device that has its serial number programmed in the FA6150RF-GP already. To delete the serial number, press **[✳]**, then press [9], then press **[✳]** again. To exit without deleting the serial number, press the **[#]** key. Press the [✳] key to continue.	Flashes the device number and a hyphen. Once the device number is entered, alternately flashes "d" with the device number; and the serial number.
3	To change any of the programming for the wireless key, perform one of the following step in the *Programming for an Installation WITH Local Wireless Keys* section. • For the user code, perform step 5. • For the loop functions, perform steps 6 and 7. • For the on-board relay assignment, perform steps 8 to 9.	Alternately flashes "d" with the device number; and "--."
4	When you have completed editing the wireless keys, press the [✳] key twice to exit the Program mode.	

Note: Upon exiting the Program mode, the FA6150RF-GP alternately flashes "Ad," the 2-digit keypad address, and the 2-digit receiver address. If either of these is incorrect, repeat steps 1 through 3 in the *Programming for an Installation Without Local Wireless Keys* section.

Troubleshooting

The following error messages cause the FA6150RF-GP to produce rapid beeps for 5 seconds. The table below describes the error messages and the corrective actions.

Display	Probable Cause	Corrective Action
Lb	Low battery in the wireless key	1. Replace the battery if the wireless key has a replaceable battery. 2. Replace the transmitter if the wireless key does not have a replaceable battery.
OC	Open circuit	Verify that the Data Out (DO) wire is connected properly.
1C	Incompatible connection	Verify that the control panel is not a First Alert-type control panel.
Check 09	1. FA6150RF-GP Receiver is not communicating 2. Another device on the keypad terminals is not communicating to the control panel	1. Verify that the Data In (DI) wire is connected properly. 2. Verify the wiring connections between the control and all other devices.

Specifications

Physical: 6-1/4" H x 4-7/8" W x 1" D (158.75mm x 123.8mm x 25.4mm)

Wiring: Refer to Wiring Table on page 2

Range: 200' nominal

Frequency: 345 MHz

Current: Standby 80mA
Backlighting on and Sounder on 105mA

Relay: Normally Open, 1A, 28VDC

Sounder: Piezo-electric (fire alarm is loud pulsing tone; burglary/audible panic alarm is continuous tone)

FOR DETAILS ON THE LIMITATIONS OF THE ENTIRE ALARM SYSTEM, REFER TO THE INSTALLATION INSTRUCTIONS FOR THE CONTROL PANEL WITH WHICH THIS DEVICE IS USED.

FCC STATEMENT

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC ID.CFS8DLFA6150RF-GP

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or installer may find the following booklet prepared by the Federal Communications Commission helpful: "Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

REFER TO INSTALLATION INSTRUCTIONS FOR THE CONTROL PANEL WITH WHICH THIS DEVICE IS USED FOR WARRANTY INFORMATION AND LIMITATIONS OF THE ENTIRE ALARM SYSTEM.

First Alert®
PROFESSIONAL SECURITY SYSTEMS

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K4460-GP 2/03